

REMARKS

This amendment responds to the Office Action which was mailed on June 12, 2003. In the claims, Claims 1-28 have been canceled, and new claims 29-45 have been substituted therefor. In addition, proposed corrections to the drawings are being submitted herewith as required in the Office Action. It is respectfully submitted that new Claims 29-45 are in condition for allowance. Request a favorable reconsideration of the application in light of the amendments and the remarks set forth below which constitute a full and complete response to the outstanding Office Action.

The drawings were objected to because Figures 1-3 contain schematic boxes which are numbered rather than legended. Informal proposed corrections to the drawings are submitted herewith, and formal corrected drawings will be submitted upon notice of allowable subject matter.

Claims 10 and 27 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More particularly, limitations such as "and/or" rendered these claims non-specific. Claims 10 and 27 have been canceled, and new claims substituted therefor. New claims 29-45 do not recite the term "and/or," so these new claims should not be considered indefinite.

Claims 21-22 and 25-27 were rejected under 35 U.S.C. § 102(b) as being anticipated by Gesteland (U.S. Pat. No. 4,388,272). Of course, in order to be anticipatory a single prior art reference must disclose all of the claimed elements or limitations of applicant's invention. It is respectfully submitted that Gesteland does not disclose all of the claim limitations of new Claim 29, and therefore, that Claim 29 is not anticipated by

Gesteland and is in condition for allowance. Applicant's invention differs from Gesteland in several respects, and these differences are reflected in Claim 29.

For example, a fundamental difference between Gesteland and applicant's invention is that applicant uses a temperature controlled housing to vary the temperature for at least one sorbent tube having a specific amount of chemical adsorbate uniformly distributed on and in equilibrium with an adsorbent material. By varying the temperature, a specific desorption rate is maintained creating a specific amount of chemical adsorbate vapor in the sorbent tube. Thus, as inert gas flows through the tube a specific concentration of chemical adsorbate vapor in the inert carrier gas is maintained. Of course, more than one sorbent tube having different amounts of chemical adsorbate uniformly distributed on and in equilibrium with adsorbent material can be disposed within the temperature controlled housing, thereby further expanding the range of concentrations of chemical adsorbate vapor in inert gas that can be produced.

In contrast, Gesteland's invention does not use temperature to produce changes in chemical vapor concentration. Gesteland's device operates only at about ambient temperature, and he varies concentration of the vapor samples by using different cartridges containing different concentrations of the odor substance. Thus, because Claim 29 recites a temperature controlled housing wherein said temperature controls the concentration of the chemical adsorbate vapor, Claim 29 is not anticipated by Gesteland.

Furthermore, as recited in Claim 29, applicant's invention is a continuous flow system, producing a continuous flow of vapor at a specified concentration based on temperature. This is accomplished by having a sorbent tube with the chemical adsorbate material uniformly distributed on and in chemical equilibrium with the adsorbent

material. When a specified flow rate of inert gas is maintained through the sorbent tube, a fixed chemical adsorbate vapor concentration is produced in a continuous manner. Applicant has demonstrated that these sorbent tubes can produce the desired low concentration of chemical adsorbate vapor for months before having to be replaced. This permits applicant to produce a continuous flow of adsorbate chemical vapor concentration, which can be varied based on the temperature maintained in the housing. This continuous flow of low-concentration vapor can then be used for passivation of chemical air monitoring systems, by continuously providing a stream of trace amounts of the chemical of interest to the air monitoring system. Thus, each and every sample processed by the chemical air monitor contains this standard amount of adsorbate chemical vapor, and serves as a pre-mixed internal calibration standard for such air monitoring devices and systems.

In contrast, Gesteland is a manually operated intermittent flow system in which the vapor is manually produced in a short "puff" by a syringe pump forcing air through the cartridge. Gesteland's device is an olfactometer apparatus, and provides one short duration puff of an odor causing substance in a gas for delivery to human subjects for testing. Different cartridges are used to produce different concentrations of the odor substances in the gas to obtain an olfactory profile of the person being tested.

Thus, based on the limitations recited in new Claim 29 and its dependent claims 30-45, it is respectfully submitted that the rejection of the present application under § 102(b) as being anticipated by Gesteland should be withdrawn.

Claims 23-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gesteland in view of Ong (U.S. Pat. No. 5,728,927). It is conceded that Gesteland does

not teach the particular adsorbate material claimed in Claims 23-24, but such materials would have been obvious in view of Ong and the fact that these were the materials desired to be monitored. However, Claims 23-24 have been canceled and new Claims 29-45 submitted. As described in the forgoing, Claim 29 is patentable over Gesteland, and Ong does not provide any teachings or disclosure which could be combined with Gesteland to produce the invention as recited in Claim 29. Although Ong's device is used to produce vapors of chemical warfare agents and other toxic materials, it does so with a completely different technology from applicant's invention. Ong's device used a liquid chemical agent feed source contained in a glass delta-tube that must be maintained at sub-ambient temperatures to avoid condensation. Ong's is a liquid chemical agent based system and is not based on adsorption/desorption to generate chemical vapors. The combined teachings of Gesteland and Ong do not teach, suggest, or provide any motivation for applicant's invention as recited in Claim 29. Therefore, it is respectfully submitted that rejection of Claim 29 and its dependent Claims 30-45 for obviousness over Gesteland in view of Ong be withdrawn.

Claims 1-4, 7-10, and 28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gesteland in view of Weis (EP 816845). Claims 5-6 were also rejected under 35 U.S.C. § 103(a) over Gesteland in view of Weis and further in view of Ong. It is conceded that Gesteland does not teach the use of an inert gas other than the implicit use of air. However, use of an inert gas would have been obvious in view of the teachings of Weis. Ong was again relied upon to teach the chemical adsorbate materials. Here again, Claims 1-4, 7-10, and 28 have been canceled and new Claims 29-45 substituted therefor. Although Weis may disclose the use of inert gas when generating a

test gas, Weis's technology is very different from and unrelated to applicant's invention. Weis teaches the thermal decomposition of a source chemical to produce a chemical vapor having a different composition. This is unrelated to applicant's invention as recited in Claim 29 which is based on temperature controlled desorption of the chemical vapor of interest. As discussed in the foregoing, the teachings of Gesteland, Ong, and Weis can not be combined to produce applicant's invention as claimed in Claim 29. The elements and limitations of new Claim 29 are simply not taught by the combined teachings of the prior art cited. Of course, the prior art also does not provide any suggestion of motivation for producing applicant's claimed invention. It is respectfully submitted that newly submitted Claims 29-45 are patentable over the prior art cited and are in condition for allowance.

In summary, Claims 1-28 have been canceled and new Claims 29-45 substituted therefor. Claims 29-45 remain in the case and based on the foregoing amendments and arguments should not be considered anticipated by or obvious over the prior art cited. Accordingly, it is respectfully submitted that these claims are patentable and in condition for allowance. Early reconsideration and withdrawal of the rejections is earnestly solicited, as is allowance of the claimed subject matter.

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Respectfully submitted,

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DATE


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